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February 8, 2018

By Electronic Filing

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Ex Parte Communication: ET Docket No. 14-165, WT Docket No. 16-290, WC Docket No. 17-310*

Dear Ms. Dortch,

This letter is submitted, pursuant to Section 1.1206(b)(1) of the FCC's rules, to notify you that representatives of the American Hospital Association ("AHA") and American Society for Healthcare Engineering of the American Hospital Association ("ASHE") had a series of meetings in which the above-referenced dockets were discussed. The representatives of AHA and ASHE were Dale Woodin, Vice President, Professional Membership Groups, AHA; Tim Adams, Director, Leadership Development, ASHE; Mark Gibson and Laura Fontaine of Comsearch, the technical consultant to ASHE; and the undersigned counsel for AHA and ASHE. Separate meetings were held with Alison Nemeth, adviser to Chairman Ajit Pai; with Commissioner Brendan Carr and his adviser Will Adams; with Commissioner Jessica Rosenworcel and her adviser Umair Javed; with Commissioner Michael O'Rielly and his adviser Amy Bender; and with Commissioner Mignon Clyburn and her adviser Claude Aiken. All meetings took place on February 6th with the exception of the meeting with Commissioner Clyburn and Mr. Aiken which occurred on February 7th. We discussed the importance of the Wireless Medical Telemetry Service ("WMTS") generally and the need to ensure WMTS services are able to operate free from interference from TV White Space devices; the need and opportunity for new spectrum in the 1.4 GHz band and the pending ASHE petition for reconsideration in WC Docket No. 16-290; and the recent AHA comments in the rural healthcare proceeding in WC Docket No. 17-310. The AHA and ASHE representatives discussed the issues addressed in the attached presentation.

Please contact the undersigned if you have any questions.

Sincerely,

/s/
Timothy J. Cooney
Patrick R. Halley

cc: Commissioner Mignon Clyburn
Commissioner Michael O'Rielly
Commissioner Brendan Carr
Commissioner Jessica Rosenworcel
Alison Nemeth
Claude Aiken
Amy Bender
Will Adams
Umair Javed

American Society for Healthcare Engineering (ASHE) of the American Hospital Association (AHA)

ET Docket No. 14-165

February 6-7, 2018

ASHE

WMTS
Wireless Medical Telemetry Service

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Agenda

- Overview of Wireless Medical Telemetry Service (WMTS)
- Protecting WMTS from interference from co-channel TV White Space (TVWS) devices at channel 37
- Expanding spectrum availability for continued WMTS growth and service enhancements
- Supporting increased broadband connectivity for rural health care providers

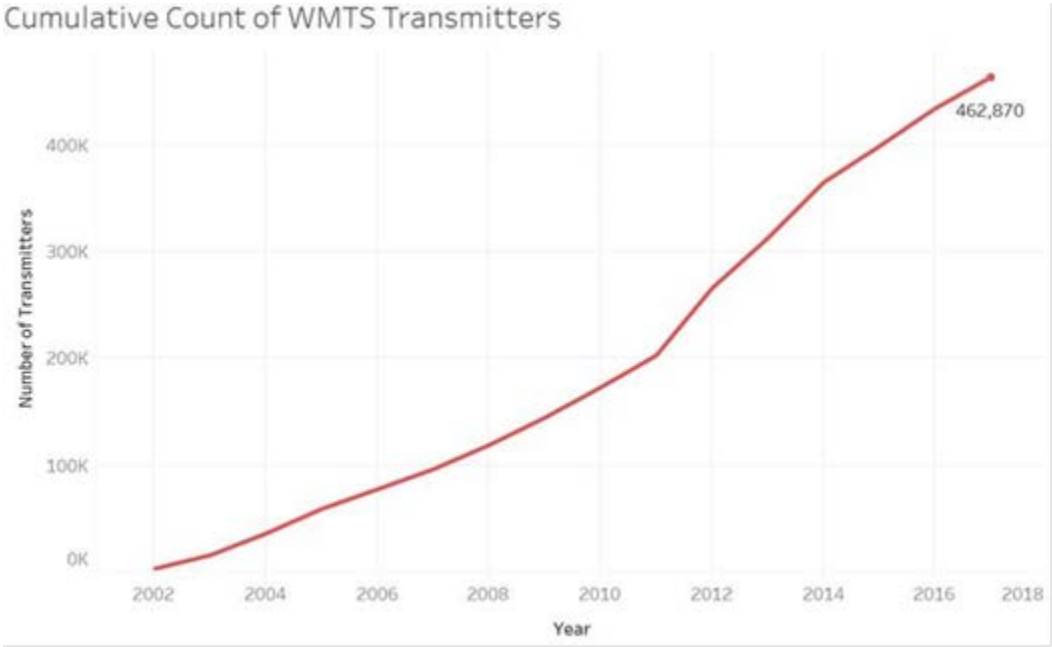
AHA and ASHE

- The AHA is the national organization that represents and serves over 5,000 hospitals, health care systems, networks, and other providers of care, and their patients and communities
- With more than 12,000 members, ASHE is the largest association devoted to professionals who design, build, maintain, and operate hospitals and other health care facilities

Brief History of WMTS

- Prior to 2000, wireless medical telemetry operated only on an unlicensed basis in TV White Spaces or on a secondary basis at 450-470 MHz
- A series of interference incidents spurred the AHA to form a Task Force to seek licensed spectrum that would be protected from interference
- FCC established WMTS as licensed service in 2000 in two main bands: 608 – 614 MHz (Channel 37) and 1.4 GHz
- The FCC appointed ASHE as the WMTS database manager in 2001

WMTS GROWTH



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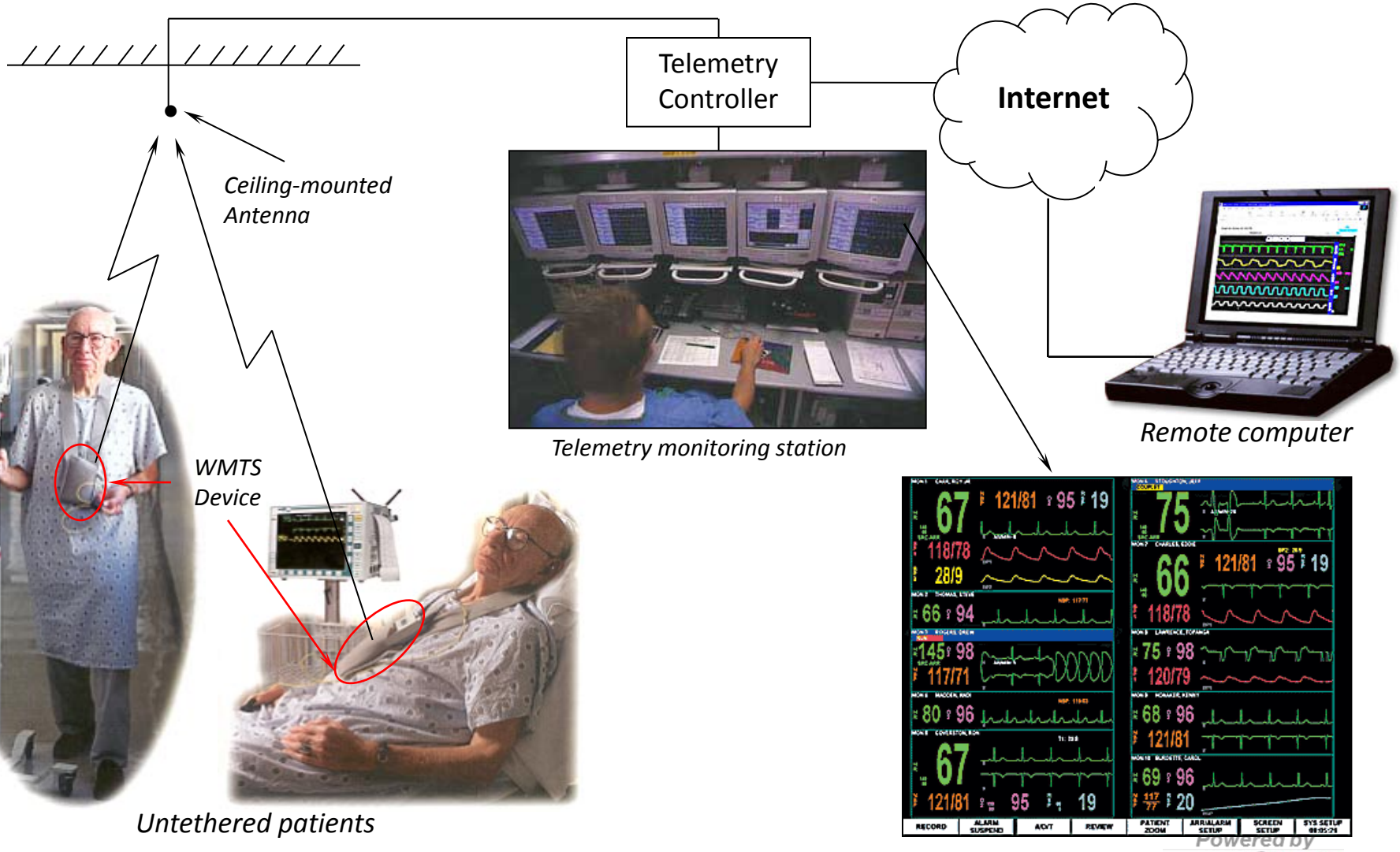
Typical WMTS Deployment



Patient Safety Depends on Effectively Functioning WMTS in Channel 37

- WMTS used daily by hospitals who have invested significantly in technology that is not easily or regularly replaced

- Primary use cases include:
  - Cardiac monitoring (adults and children)
  - Fetal monitoring (Channel 37 is the only band currently being used for this purpose)
  - Monitoring vital signs of critically ill patients and other patients who are ambulating

WMTS Community's Proactive Efforts

- GE Healthcare (GEHC) and Comsearch conducted tests in 2015 at 3 hospitals demonstrating interference would be caused by a TVWS device operating on Channel 37 at the power level, separation distance and height proposed
- WMTS Coalition engaged with Google in 2015 to determine appropriate protection zones as well as means to allow TVWS operation within the zone, when feasible
- Microsoft is leading TVWS proponent in 2017, and its advocacy confirms ASHE's concern: "Wireless signals in this [TVWS] range can travel over hills and through buildings and trees"
- Discussions with Microsoft were initiated by WMTS Coalition, but efforts to engage on testing protocol have stalled

August 2015 *Part 15 Report and Order*

- FCC adopted technical rules that are inadequate to protect Channel 37 WMTS
- In his concurrence, then-Commissioner Pai highlighted one of many technical errors in the order: “the FCC's technical analysis is based on the assumption that hospitals with WMTS devices are no more than three stories tall. But the record shows that a majority of hospitals with WMTS devices are taller than that.”
- Order requires test deployments before full roll-out and provides for waivers to adjust protection zones as necessary
- WMTS Coalition and GEHC filed petitions for reconsideration in WT Docket 14-165, which remain pending and should be granted to ensure patient safety

The FCC Should Grant Reconsideration of Channel 37 Sharing Issues

- FCC should correct technical errors and omissions in *Part 15 Report and Order* to provide sufficient separation distances between TVWS devices and WMTS
  - Separation distances should be approximately 3 times those adopted (as set forth in WMTS Coalition and GEHC Reconsideration Petitions)
- Costly and resource intensive waivers can be avoided if separation distances are properly adopted
- Sufficient testing must be done before the widespread deployment of TVWS devices in Channel 37
- Burden of ensuring interference protection should be on unlicensed TVWS operators, not licensed WMTS. A stop-buzzer in case of interference should be implemented
- FCC must ensure dependability of TVWS Database system

More Spectrum is Needed to Meet Growing WMTS Demand

- *"With an increasing number of wireless medical telemetry devices being utilized at Steward's hospitals, we are beginning to see signs of spectrum congestion and interference between these monitoring devices. Moreover, we expect that our wireless medical systems will only become more densely distributed in our facilities over time, as our patient population continues to become older and more subject to acute medical issues*."
  - Steward Healthcare, July 12, 2017

- *"WMTS networks already are using the total allowable bandwidth. In some cases this leaves no capacity available to add monitored parameters in response to requests or to add new patients to the monitoring network. The deficit in WMTS spectrum at 1.4 GHz is due to the bandwidth limits in the WMTS allocation itself, which consists of only 7.5 MHz. The result is that there is not enough spectrum bandwidth for Philips to provide the full capabilities that hospitals and medical personnel are requesting*."
  - Philips Healthcare, Nov. 9. 2017

Unique Opportunity for More WMTS Spectrum at 1.4 GHz

- 1.4 GHz WMTS band is extensively used and spectrum congestion at some locations is occurring
- Additional spectrum would support the demand for encryption at VA hospitals and elsewhere while retaining current capabilities and coverage
  - Meeting WMTS data security (encryption) requirements roughly **doubles** the amount of spectrum necessary per patient
- Significant opportunity to expand 1.4 GHZ WMTS spectrum by permitting WMTS use in adjacent Terrestar spectrum
  - Wireless Bureau should reconsider its recent denial of the TerreStar waiver which would bring significant benefits to hospitals/patients
  - WMTS manufacturers are ready to immediately put the spectrum to use for WMTS
- Absent reconsideration in WT Docket 16-290, the spectrum will likely lie fallow for years with no clear alternative high-value use that will not cause interference to current WMTS operations

AHA Supports Efforts to Update the Rural Healthcare (RHC) Program

- RHC Program ensures affordable broadband access for many healthcare providers, which supports vital telehealth services that are demonstrated to improve health outcomes for underserved rural communities.
- FCC should:
  - Increase RHC Program cap starting in FY 2017 and on a going forward basis at the rate of inflation
  - Make unused RHC funds from previous funding years available for subsequent funding years
  - Maintain policies that encourage, not restrict, provider participation in healthcare consortia, including non-rural hospitals
  - Ensure efforts to strengthen program efficiency and integrity do not prevent applicants (even those receiving particularly high levels of support) from receiving support necessary to meet their needs
  - Eliminate unnecessary administrative complexity to incentivize participation.

Contact Information

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ASHE

WMTS Wireless Medical Telemetry Service

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